

# **LEARNING STATION #3**

## **AGRICULTURE**

# Barbed Wire

<http://www.archives.gov/education/lessons/barbed-wire/>

Life in the American West was reshaped by a series of patents for a simple tool that helped ranchers tame the land: barbed wire. Nine patents for improvements to wire fencing were granted by the U.S. Patent Office to American inventors, beginning with Michael Kelly in November 1868 and ending with Joseph Glidden in November 1874. Barbed wire not only simplified the work of the rancher and farmer, but it significantly affected political, social, and economic practices throughout the region. The swift emergence of this highly effective tool as the favored fencing method influenced life in the region as dramatically as the rifle, six-shooter, telegraph, windmill, and locomotive.

## UNITED STATES PATENT OFFICE.

JOSEPH F. GLIDDEN, OF DE KALB, ILLINOIS.

### IMPROVEMENT IN WIRE FENCES.

Specification forming part of Letters Patent No. 1257,126, dated November 24, 1874; application filed October 27, 1872.

To all whom it may concern:

Be it known that I, JOSEPH F. GLIDDEN, of De Kalb, in the county of De Kalb and State of Illinois, have invented a new and valuable improvement in Wire Fences; and that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of a section of fence exhibiting my invention. Fig. 2 is a sectional view, and Fig. 3 is a perspective view, of the same.

This invention has relation to means for preventing cattle from breaking through wire fences; and it consists in combining, with the twisted fence wire, a short transverse wire, coiled or bent at its central portion about one of the wire strands of the twist, with its free ends projecting in opposite directions, the other wire strand serving to bind the spur wire firmly to its place, and in position, with its spur ends perpendicular to the direction of the fence wire, lateral movement, as well as vibration, being prevented. It also consists in the construction and novel arrangement, in connection with each twisted fence wire, and its spur wires, connected and arranged as above described, of a twisting key or head-piece passing through the fence-post, carrying the ends of the fence-wire, and serving, when the spurs become loose, to tighten the twist of the wire, and thus render them rigid and firm in position.

In the accompanying drawings, the letter B designates the fence-post, the twisted fence-wire connecting the same being indicated by the letter A. C represents the twisting-key, the Shank of which passes through the fence-post, and is provided at its end with an eye, E, to which the fence-wire is attached. The outer end of said key is provided with a transverse thumb-piece, G, which serves for its manipulation, and at the same time, abutting against the post, forms a shoulder or stop, which prevents the contraction of the wire from drawing the key through its perforation in said post.

The fence-wire is composed of at least of two strands, a and c, which are designed to be twisted together after the spur-wires have been arranged in place.

The letter D indicates the spur-wires. Each of these is formed of a short piece of wire, which is bent at its middle portion, as at B, around one only of the wire strands, this strand being designated by the letter a. In forming this middle bend or coil several turns are taken in the wire, so that it will extend along the strand-wire for a distance several times the breadth of its diameter, and thereby form a solid and substantial bearing-head for the spurs, which will effectively prevent them from vibrating laterally or being pushed down by cattle against the fence wire. Although the spur-wires may be turned at once around the wire strand, it is preferred to form the central bend first, and to then slip them on the wire strand, arranging them at suitable distances apart. The spurs having thus been arranged on one of the wire strands are fixed in position and place by approaching the other wire strand c on the side of the bend from which the spurs extend, and then twisting the two strands a and c together by means of the wire key above mentioned, or otherwise. This operation locks each spur-wire at its allotted place, and prevents it from moving therefrom in either direction. It clamps the bend of the spur-wire upon the wire a, thereby holding it against rotary vibration. Finally, the spur ends extending out between the strands on each side, and where the wires are more closely approximated in the twist, form shoulders or stops, which effectively prevent such rotation in either direction.

Should the spurs, from the unwinding of the strands, become loose and easily movable on their bearings, a few turns of the twisting-key will make them firm, besides straightening up the fence-wire.

What I claim as my invention, and desire to secure by Letters Patent, is—

A twisted fence wire having the transverse spur-wire D bent at its middle portion about one of the wire strands a of said fence-wire, and clamped in position and place by the other wire strand c, twisted upon its fellow, substantially as specified.

JOSEPH F. GLIDDEN.

Witness:

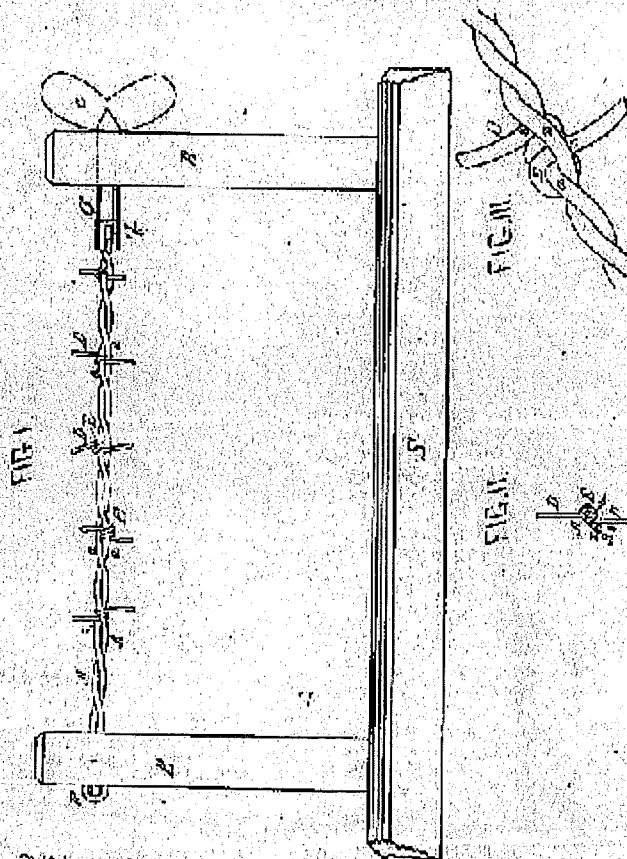
O. L. CHAPIN,  
J. H. ELLIOTT.

Glidden's patent, No. 157124, was issued November 24, 1874.

J. F. GLIDDEN.  
Wire-Fences.

No. 157,124.

Patented Nov. 24, 1874.



Witnessed:

*J. H. Glidden*  
*S. J. Ballou*

Inventor:

*J. F. Glidden*  
*By J. H. Chapman*  
*Att'y.*

## McCormick Reaper

Cyrus McCormick's mechanical reaper, invented in 1831 and patented in 1834, made its creator fantastically rich. It also helped transform the Midwest into America's breadbasket. Before the mechanical reaper, wheat was harvested by hand. McCormick's horse-drawn machine could cut more wheat in a day than could half a dozen men. But it wasn't just the reaper's power that made McCormick successful. He used newspaper advertising, product warranties, and installment sales to boost reaper sales. And he had the good sense to move his manufacturing operation from his home state of Virginia to Chicago, Illinois, at the edge of some of the richest farmland in the world.



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# Morrill Act

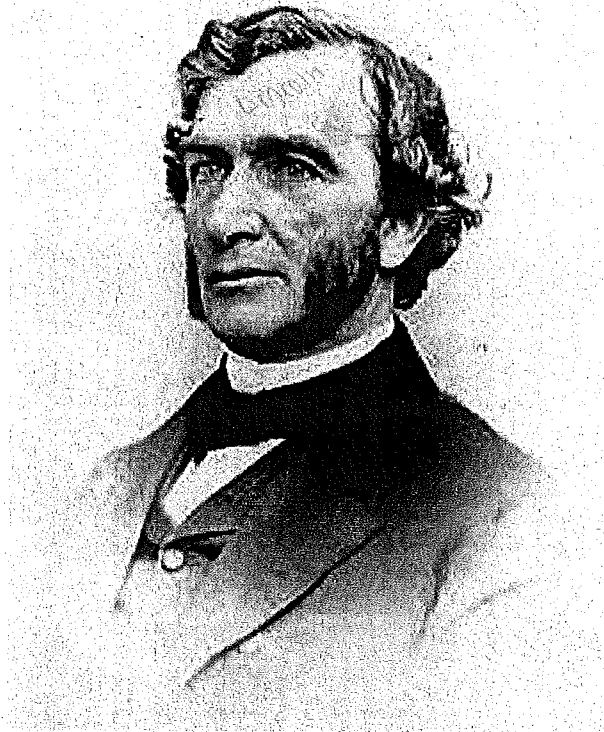
Sponsored by Vermont Congressman Justin Morrill, the Morrill Act was signed into law by President Abraham Lincoln on July 2, 1862. Officially titled "An Act Donating Public Lands to the Several States and Territories which may provide Colleges for the Benefit of Agriculture and the Mechanic Arts," the Morrill Act provided each state with 30,000 acres of Federal land for each member in their Congressional delegation. The land was then sold by the states and the proceeds used to fund public colleges that focused on agriculture and the mechanical arts. Sixty-nine colleges were funded by these land grants, including Cornell University, the Massachusetts Institute of Technology, and the University of Wisconsin at Madison

## Transcript of Morrill Act (1862)

**Chap. CXXX.--AN ACT Donating Public Lands to the several States and Territories which may provide Colleges for the Benefit of Agriculture and Mechanic Arts.**

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there be granted to the several States, for the purposes hereinafter mentioned, an amount of public land, to be apportioned to each State a quantity equal to thirty thousand acres for each senator and representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty: *Provided*, That no mineral lands shall be selected or purchased under the provisions of this Act.*

**SEC. 2.** *And be it further enacted, That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections, not less than one quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands within the limits of such State, and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share: said scrip to be sold by said States and the proceeds thereof applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever: *Provided*, That in*



Morrill, Justin S. (Justin Smith),  
1810-1898.

Civil War photograph album,  
ca. 1861-65.

(James Wadsworth Family Papers).

Manuscript Division.

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no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents, or less, per acre: *And provided, further,* That not more than one million acres shall be located by such assignees in any one of the States: *And provided, further,* That no such location shall be made before one year from the passage of this Act.

<http://www.ourdocuments.gov> US National Archives and Administration